ANNUAL REPORT

of the

CANCER TREATMENT and RESEARCH FOUNDATION

of

Nova Scotia

APRIL 1, 1985 to MARCH 31, 1986

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Chairman's Remarks

Hon. Ronald Russell
Minister of Health
Province of Nova Scotia

Dear Mr. Russell:

I am once again pleased to report on the Cancer Treatment and Research Foundation of Nova Scotia for the year ending March 31st, 1986.

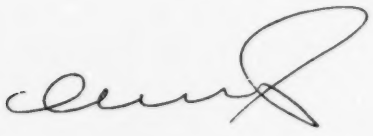
You may recall that during the previous year, the Board approved a mission statement and guide lines for clinic operation as well as certain administrative support changes. I am pleased to advise that the guide lines and changes adopted by the Board have been substantially implemented and we find that as a result we have increased the effectiveness of our Foundation. It has become apparent however, that we are in dire need of additional space complimented by an alteration of existing space in order to provide the services demanded of our Foundation.

At the present time we recognize an urgent need for additional Radiology Oncologists and I am pleased to advise that a very active program of recruitment is underway with strong indications that we will be able to recruit quality people. It should be recognized that our problem in this area is one shared by most Cancer agencies throughout Canada and, unfortunately, it does place us into a very competitive market.

Our outreach program, particularly with regards to Satellite Clinics in Sydney and Yarmouth, is progressing slowly, but I believe properly. We are very much aware of the need to involve these local Centres in the organizing and structure of these Clinics consistent with available resources. I am confident that these programs will advance more quickly once the necessary terms of reference have been concluded.

Although our Foundation is an active participant in clinical research, we still lack resources to be active in any meaningful basic research programming. I expect that this concern will have to be addressed in the very near future.

I wish to acknowledge the dedication of our Foundation employees and medical staff. I believe that it is as a result of their efforts that our Foundation enjoys an excellent reputation as a quality Institution. I would particularly like to publicly thank Dr. D. H. Thomson, our Executive Director - Medical, and Mr. Harry Churchill, the Executive Director-Administration, who both continue to provide excellent leadership and direction to the Foundation.



C.H. Durland
Chairman

FOUNDATION

Mr. Clare Durland, Q.C. — *Chairman*
Mrs. Florence Stevens
Mr. Gerald Martin
Mrs. Marlene Grantham
Mrs. Mary Ray
Mrs. Jans Henderson
Dr. Peter Jackson
Mr. William Gilbert
Dr. Emerson Moffitt
Dr. W. Carl Tupper
Miss Shulamith Medjuck
Mr. Richard O. Isner

COMMITTEES

EXECUTIVE COMMITTEE
Mr. C.H. Durland — *Chairman*
Mrs. F. Stevens
Dr. D.H. Thomson
Mr. H.J. Churchill

FINANCE AND PERSONNEL COMMITTEE
Mrs. F. Stevens — *Chairperson*
Mr. C.H. Durland
Mr. R. Isner

COMMUNICATIONS COMMITTEE
Mr. G. Martin — *Chairperson*
Mrs. M. Ray
Mrs. J. Henderson
Mrs. S. Hardy
Dr. D. White
Mr. H. Churchill

RESEARCH COMMITTEE
Dr. E. Moffitt — *Chairperson*
Dr. W.C. Tupper
Dr. A. Thomson
Dr. J. Aquino
Dr. D. Thomson
Dr. A. Pyesmany

MEDICAL ADVISORY COMMITTEE
Dr. D.H. Thomson
Dr. Michael Cook
Dr. S. Awad
Dr. G.A. Lawrence
Dr. R.H. Burnett
Dr. S.M.A. Naqui
Dr. R.J. Bedard
Dr. R. Anderson
Dr. S.C. Robinson
Dr. D.A. Gillis
Dr. V.W. Ing
Dr. B. Perey
Dr. J.D. Black
Dr. A. Pyesmany
Dr. G.P. Konok
Dr. J.M. O'Brien
Dr. M.R. Rajani
Dr. J.W.I. Morse
Dr. T.B. Murphy
Dr. J. Haldane

EXECUTIVE DIRECTOR'S ADVISORY COMMITTEE

Dr. D.H. Thomson
Dr. O. Wong
Dr. D. White
Dr. J. Aldrich
Dr. R.C. Fraser
Dr. P. Belitsky
Dr. F. Wong
Dr. G.W. Bethune
Dr. J.B. Ross
Dr. L.A. Fernandez

HALIFAX CANCER CLINIC
MEDICAL STAFF

DERMATOLOGY
Dr. J. Klotz
Dr. A.H. Murray
Dr. J.B. Ross

GYNAECOLOGIC ONCOLOGY
Dr. R.C. Fraser
Dr. S.C. Robinson
Dr. M.G. Tompkins
Dr. C. Tupper

MEDICINE
Dr. B.W.D. Badley
Dr. S.F. Bedwell
Dr. L. Fernandez
Dr. J.D. Gray
Dr. O.A. Hayne
Dr. V.W. Ing
Dr. R.L. Kirby
Dr. P.L. Landrigan
Dr. G.R. Langley
Dr. D.J. MacIntosh
Dr. J.M. MacSween
Dr. T.J. Marrie
Dr. J.J.P. Patil
Dr. J.L. Sapp
Dr. W.F. Schlech
Dr. A.H. Shears
Dr. B.L. Sheridan
Dr. C.N. Williams

MEDICAL ONCOLOGY
Dr. D.F. White
Dr. R. Wierzbicki

RADIATION ONCOLOGY
Dr. D.H. Thomson
Dr. R.M. Cunningham
Dr. J.F. Filbee
Dr. O.S. Wong
Dr. L.A. Garcia-Nicoletti (To December 31, 1984)
Dr. B.H. Jo
Dr. C. Shea

SURGERY
Dr. D.C.G. Bethune
Dr. G.W. Bethune
Dr. A. Bodurtha
Dr. C. Bugden
Dr. M.T. Casey
Dr. J.H. Charman
Dr. J.P. Curry
Dr. C.H. Graham
Dr. W. Henderson
Dr. G.P. Konok
Dr. A.S. MacDonald
Dr. A.C. MacDonald
Dr. D.E. Morris
Dr. D.W. Nicholson
Dr. S.T. Norvell
Dr. B.J. Steele
Dr. J.K. Purves
Dr. P. McDermott

UROLOGY
Dr. R.B. Auld
Dr. S.A. Awad
Dr. P. Belitsky
Dr. W.A. Ernst
Dr. F.G. Mack
Dr. R.D. Schwarz
Dr. S. Yoon

NEUROSURGERY
Dr. R.O. Holness
Dr. W.J. Howes

OTOLARYNGOLOGY
Dr. G.M. Novotny
Dr. F.S.H. Wong

Administration

Dr. D. H. Thomson
- *Executive Director - Medical*

Mr. H. J. Churchill
- *Executive Director - Administration*

Miss A. Titus
Mrs. N. Sims
- *Executive Secretaries*

Mr. G. Hatcher
- *Office Manager*

Mrs. L. Pearston
Mrs. J. Burns
Miss M. Haase
Miss T. Lipskey
Mrs. K. White
Mrs. B. Spellman
- *Support Staff*

Mrs. M. Penny
- *Cancer Society Patient Services Program*

Report of the Executive Director - Medical

During the few years that the Cancer Treatment and Research Foundation of Nova Scotia has been in operation we have witnessed change from a mainly oriented facility to an organization which emphasizes both patient care and clinical research.

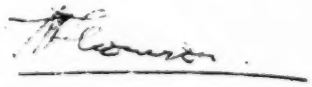
On the clinical side greater emphasis has been placed on multi-disciplinary consultation and plans are underway to solidify well organized, structured, multidisciplinary clinics.

Doctor K. Singapuri has been added to the medical staff of the Department of Radiation Oncology and Doctor Vandenberg will be joining the Department of Medical Oncology in July.

As will be seen from the departmental and division reports the Foundation is responding to its mandate and is vibrant at all levels.

The clinical research program is limited to funded protocols from the National Cancer Institute and several funded studies from pharmaceutical companies. However, a clinical trials unit has been organized with a secretary and a coordinating nurse. This unit is self supporting, but is limited in scope because of lack of funding through our budget. Through the efforts of the medical staff of the Foundation, Nova Scotia is one of the highest contributors to the National Cancer Institute clinical trials quite out of proportion to our population.

I am pleased to say that our staff have worked hard to maintain a high quality of patient care during the past twelve months.



D. H. Thomson, M.B., F.R.C.P.(C)
Executive Director - Medical

Report of the Executive Director - Administration

The year ending March 31, 1986, was one of change and growth. The information contained in our Annual Report outlines the activities of our staff during this period.

The Patient Services Committee of the Board completed their review of the organization and services of the Foundation. As a result, some changes in the organizational structure occurred, and guidelines established for the role of clinics.

The Research Committee approved two projects for funding assistance. The Foundation is gradually receiving more funds through memorial and other donations. Regularly, during the year, cards and personal 'thank you's' were received by the staff in appreciation for their services.

The Communications Committee was very active during the year. Department heads and others attended the meetings and provided information on their role and activities within the Foundation. Our Newsletter provides information on our Foundation and has a wide distribution. We are pleased with the comments received on the initial issues.

The Lions Clubs of Nova Scotia provided funds for the puchase of a 'Mobilizer' This is a mobile stretcher that lifts patients that come for treatment and is valued in excess of $20,000. The Lions and Lionettes of Barrington Passage donated funds in order that we could purchase a fibropic bronchoscope and a pump for administering chemotherapy drugs. These were valued at $12,000. We are very grateful for these and other donations which are greatly assisting our patients and their care.

The annual meeting of cancer agencies was held in Toronto. We had an opportunity to visit some facilities as well as hear what was currently taking place across the country. The sharing of information continues to be of value to all in attendance. We will be hosting these meetings in October, 1986.

The Foundation would be remiss if it did not thank the volunteers who serve refreshments to our patients; the Dianna Bleakney Guild and the Canadian Cancer Society are most welcome and appreciated.

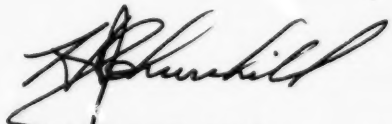
During the year, regular departmental and committee meetings are held to assist in the day to day operation of the Foundation. We are continuing to expand the programs used in our computerized Patient Information System. The Cancer Registry continues to be a vital part of our work and a special study is being conducted to look at the various reports, tests, etc., received by the Registry for input into the system.

The Foundation adopted a total non-smoking policy within its facility.

In February, 1986, Jean Dickson was appointed Director of Nursing, replacing Virginia Teasdale, who resigned in late 1985.

The Financial Statements to March 31, 1986, indicate an operating deficit. This is a result of reduced revenue for billings of in-patients, as well as our drug costs being higher than projected. I am pleased to advise that the Department of Health have indicated that this will be funded.

In conclusion, I would like to express my appreciation to the Board and, in particular, our Chairman, Mr. Durland, for their support and guidance during the past year. I would also like to thank the staff for their efforts in providing our patients with the care, treatment, concern and comfort so necessary when they visit our Foundation.



H. J. Churchill, C.H.E.
Executive Director - Administration

Foundation Patients Seen At Halifax Clinic
April 1, 1984 - March 31, 1986

Year	New Patients	Number of Patients Visits		
		Clinic	Radiation	Chemotherapy
Apr. 1, 1985 March 31, 1986	2,246	12,473	19,777	1,369
Apr. 1, 1984 March 31, 1985	1,802	12,862	20,964	1,704

Patients Treated By Radiation

Type of Treatment	No. of Patients		No. of Treatment Visits	
	Apr. 1/85 Mar. 31/86	Apr. 1/84 Mar. 31/85	Apr. 1/85 Mar. 31/86	Apr. 1/84 Mar. 31/85
X-Ray	154	158	496	649
Linear Accelerator	716	659	9,716	9,759
Cobalt	961	1,027	9,185	10,175
Gold Seed	50	42	50	42
Cesium	115	140	129	143
Beta Ray	56	45	56	61
Other (P32, I131)	145	135	145	135
TOTAL	2,197	2,206	19,777	20,964

CLINICAL TRIALS UNIT

Director	Dr. D. White
Clinical Trials Nurse:	Mrs. Geralyn Hirsch
Clinical Trials Secretary	Mrs. Bernice Chatt

Clinical trials research is an essential component of the work of the Oncology staff at any academic Cancer Treatment and Research Centre. At the CTRFNS we have in place a dedicated clinical trials unit staffed by an experienced clinical trials nurse and data manager, working independently in the Foundation under the direction of a medical oncologist.

We are currently involved in 15 different research projects and as well have another 13 trials pending. Cumulative patient accrual is now well over 300 patients on all studies.

There are 2 major investigative Phase III studies which compare new therapeutic modalities versus a standard treatment and Phase II studies which look at specific activity of new drugs against particular cancer sites. The unit has several interactions outside the Foundation with both pharmaceutical companies, as well as several multi-institutional clinical trial groups, including the National Cancer Institute of Canada, the Southeastern Cancer Study Group and the Lung Cancer Study Group (U.S.A.)

Future goals of the Clinical Trials Unit in the Foundation include increasing the awareness of physicians not only in Halifax, but in peripheral communities of the facilities available for cancer treatment and research, expanding the role of clinical investigation to other tumour sites and improving the quality control of data generated from clinical investigations to internationally acceptable standards. There is, as well, as increased emphasis on measurement of quality of life.

A major goal of the Foundation through the Clinical Trials Unit as well could be the democratization of the process of clinical research, so that any patient who would express a desire to discuss investigational therapy for incurable diseases would have the option and right of doing so.

DATA PROCESSING DEPARTMENT

J. Smith Co-ordinator
A. Kyte Data Control Clerk

A major advancement for the Foundation's Patient Information System this year was the loading of diagnostic data for the period 1979 - present and 1964 - 1968 inclusive. Having such information available via the computer allows easy access and retrieval for epidemiological studies, statistical requests, surveys etc. thus expanding the scope of system "user's" to include physicians, external health agencies, other provinces etc. Although the type of diagnostic information stored is relatively basic (Site, Histology, Diagnosis Date, Treatment etc.) it satisfies the majority of requests made to the Foundation and simplifies the abstracting procedure when manual chart searches are required.

At the same time as this data was being loaded, the Annual Incidence Reporting package was being implemented and tested. This package will allow the Foundation to generate accurate and timely statistics on an annual basis in the form of both paper reports and a magnetic data tape for Statistics Canada.

Concurrently with the loading and processing of diagnotic data was the implementation of the on-line Patient/Resource Scheduling System for all clinics/resources with the Foundation. This application allows patient appointments to be booked directly at a "terminal" with current information available immediately throughout the clinic. Doctors schedules are generated daily and numerous statistical and auditing reports are available upon request., Initial work has focused on consulting clinics but plans are to expand to include all Foundation resources in the near future.

Expansion of the type and quality of data available on the system has been followed by a corresponding increase in the number and location of computer terminals to access this information. Expansion includes such areas as Nursing, Technical, Physicians and Secretarial and Physics. This necessitated an upgrade of our computer hardware (increase in memory) and the installation of a new operating system which took place in the spring and went very smoothly. Special advisory and planning committees have also been established to monitor and guide further system advances.

Other facets of the ever changing Data Processing environment include:

. tailoring the existing system to better suit the Foundation needs and generating statistical reports, survey requests, studies etc.

. design and implementation of on-line functions to allow capture and analysis of information for special studies being carried out within the Foundation (Lung, Endometrium)

. analysis of the CYCARE Medical Services Reporting application as it relates to the Foundation and the associated resources, equipment and information requirements. (A special committee has been established to co-ordinate the implementation of this application.) investigation into the use of micro computers within the Foundation both as they relate to the Patient Information System and in other areas such as Word Processing, Clinical Trials software, accessing remote data/locations (PDQ, MEDLARS) etc.

Major goals for the 1987 year will be:

. completion of the loading of diagnostic information to include the period from 1969 thru 1978 thus giving our Registry a statistical base from 1964 to present.

. expansion of the on-line Resource Scheduling system to include all clinics/resources within the Foundation along with comprehensive statistical and audit reports.

.implementation of the Medical Services Reporting package to track patient care (treatments, visits etc) while at the clinic and automatic generation of valuable work load and billing statistics (currently produced manually).

. implementation of an automated Letter Follow-up system to track patient's progress upon leaving the Foundation's care.

. further investigation of the use of mini-computers within the Foundation particularly in the area of Word Processing and Clinical Trials management.

DIVISION OF GYNECOLOGIC ONCOLOGY

Organization

Gynecologic Oncologist	- R.C. Fraser, Head, Division
	- M. G. Tompkins, Co-ordinator
	- John Jeffrey, NCIC Clinical Trials
Radiation Oncologists	- Oscar Wong
	- John Filbee
	- Kishor Singapuri
Consultant, Medical Oncology	- R. Wierzbicki

GENERAL INFORMATION

The Gynecologic Oncology Disposition Clinics are held each Tuesday and Friday morning from 10 a.m. until 11 a.m. During the past year, 495 patients were discussed with problems related either to newly diagnosed gynecologic malignancy, or complications requiring alternative treatment modalities.

Our follow-up clinics are also held Tuesday and Friday mornings from 8:30 a.m. until 12:00 noon. These clinics accommodated 1,897 patient visits during this year. The multi disciplinary planning approach continued to be our recommendation for patients referred to our group for evaluation.

RESEARCH - EDUCATION

Clinical research continues to be an ongoing activity of this Division. During the past year, data from the Cancer Treatment and Research Foundation Statistical Bank has been reviewed concerning uterine sarcomas. This data will be presented at two locations-in the spring of '86 by Dr. Peter Grant to the Gynecologic Oncology Society of Canada at their meeting in Charlottetown, P.E.I., and in the fall at the Atlantic Society of Obstetricians and Gynecologists Meeting in Saint John, N.B. by Dr. John Jeffrey.

The National Cancer Institute Clinical Trials Group concerned with ovarian cancer continues to develop and implement new treatment protocols as the need arises. Currently the Ovarian 6, 7 and 8A protocols have been implemented and are ongoing. An additional, new, experimental research protocol untilizing an investigational drug is being undertaken by the National Cancer Institute, and we in our Divison of the Foundation are actively involved. Dr. John Jeffrey co-ordinates all our activities within Clinical Trials and is our representative to the National Cancer Institute of Canada.

Mrs. Mary Trott, the Division's Nurse Co-ordinator, continues to be primarily responsible for data retrieval within the Ovarian Cancer Clinical Trials. She functions both in the hospital's Gynecologic Oncology Unit and the out-patient facilities located in the Foundations. Mrs. Trott is planning to attend a colloguim in Clinical Trials scheduled for the fall of '86 in Halifax.

MANPOWER

In August '85 Dr. John Jeffrey arrived and has now been integrated within the Dept. of Obstetrics & Gynecology of Dalhousie University, and the Dept. of Gynecology, Victoria General Hospital, and within the Division of Gynecologic Oncology at the Nova Scotia Cancer Treatment & Research Foundation.

PARAMEDICAL SUPPORT SERVICES

The Division of Gynecologic Oncology within the Foundation continues to promote and provide necessary support services for our patients. This include such benefits as nutritional counselling, social services

assessment and the participation of volunteers, both of the Nova Scotia Division of the Canadian Cancer Society and the Diana Bleakeney Guild. We continue to encourage our support staff to suggest new ways in which we can provide better service for your patients. As we continue to explore and develop the concept of continuity of care between our Foundation Follow-up and Disposition Clinics, and our in-patient Victoria General Hospital Gynecologic Oncology, and the services plus attendance at various meetings and clinics, have continued during this year. This tends to promote unity and bring much comfort to many patients.

ADMINISTRATION

The division of Gynecologic Oncology continues to be active in its role of developing this subspecialty to provide increasing levels of patient care for women in Nova Scotia afflicted with gynecologic malignancies.

Negotiations at the present time have begun in the hopes of establishing a Gynecologic Oncology Cancer Foundation Followup Clinic in the Cape Breton area. These negotiations are ongoing and involve members of the Division, members of the Dept. of Obstetrics & Gynecology Breton, and the Administration of the Foundation.

APPRECIATION

We in the Division would like to express our appreciation to the Nova Scotia Cancer Treatment and Research Foundation, Administration, Nursing Staff, Technicians, for their cooperation during this year and that anticipated in the future. In addition, we thank all the physicians in this province, and those of our neighboring provinces, who support our programs and encourage us to develop new approaches in order to benefit their patients with gynecologic cancer.

HEALTH RECORDS DEPARTMENT

STAFF

Health Record Administrators:	Thelma Croucher, Head Beverley Kaulback, Supervisor Jean James Karen Starratt
Health Record Technicians:	Glenys Jackman Connie Woodland, Term Position
Medical Secretaries:	Michele Dempsey Bertha Furlong Murdell Hall (Aug/85-Mar 86) Mary Hutchins (Apr/85-Aug/85) Florence MacKenzie Sheila Richardson Elizabeth Ypelaar
Medical Stenographer: (part time)	Dale Tibbo
Department Secretary:	Yvonne VanDyk
Clerk-Typists	Joyce Christie Ann Cooper Gail Deveau (Apr/85-June/85) Linda Eisenhauer Arlene MacDonald Beverley MacMillan Clerise Smith Judy Swinamer Rosalee Walker, Term Position
File Clerk:	Brenda Redmond

General Departmental Activities

Since the time of the last Annual Report, our department has continued to expand its scope, therefore resulting in improved quality of information on the chart and the computer system. Procedures have been streamlined which assist in achieving the goal of improved patient care through a complete health record.

By the end of this fiscal year, the majority of clinic and doctor's schedules were on the system.

Many staff procedures were reviewed, as well as staffing guidelines updated, and up-to-date documentation was made available, thus bringing procedures into alignment with the system and creating a more uniform job flow.

The filing space, acquired the previous year, was taxed to the limit, thus expired charts, dating back to 1953 were indexed and boxed, ready for an off-site storage location (approval was given to store expired charts off-site to within a 5 year time range). Auditing of data inputted on the system daily became part of our department's role and assured accuracy and completeness of data.

As well as doing chart analysis and system-related procedures, senior staff continued their involvement in new and ongoing studies as well as generating monthly statistics for our department. They are awaiting the start of medical service reporting part of system; no target date has been established for its initiation.

As the need justified, two decentralized filing areas were started to store charts of patients either on active treatment, admitted to hospital or involved in a clinical trial; this has proved an effective change for all staff concerned.

Manual control of chart flow for active clinic patients is still not at a level to ensure continuous acceptable standard. A definite consideration for future planning is computerized chart tracking.

Our department continues its involvement in giving overviews and tours of the department to appropriate student bodies, as well as speaking to external agencies about our department.

Staff in most areas have attended workshops/seminars during this year.

Summer relief was approved for the months of July and August in the secretarial area as well as one for Records Office and Reception area to handle the continous patient volume during peak staff vacation periods.

The Health Records Department continues its participation in the majority of release of chart-related information to facilitate ongoing patient care.

The following are the committees with which our department is actively involved:

- Health Record Department
- Patient Information Co-ordinating Committee
- User Group
- Occupational Health & Safety Committee
- Foundation Newsletter Committee

Reception Area

Three clerk-typists, filling the roles of Admission Clerk, Patient Scheduling Clerk and Interview/Re-booking Clerk, maintain a pleasant, efficient atmosphere for patients' initial and return contact with the Foundation.

Patients are now interviewed in a separate area which affords them the courtesy of a relaxed, private area for the exchange of information.

By the end of this fiscal period, the majority of clinic/doctor schedules had been converted from a manual booking system to the computer format. This greatly enhanced the production and distribution of the daily clinic lists used by internal and external areas.

In the latter part of 1985, a new multiple-copy admission/separation form was developed to improve patient and information flow with the clinic.

Approximately 2,000 patients were interviewed, there were 12,468 patients seen in the Halifax Clinic and, of that number, 9,824 received a return appointment date for the 1985-86 fiscal year.

Records Office

There is one H.R.A., one H.R.T., 4 clerk-typists, and one file clerk working in this area to ensure charts are in proper order for clinic visits; current reports are reviewed by the doctor and available on the chart; post-clinic charts meet the necessary standards before returning to file. An area in this office for doctors to review charts and reports was established; this was implemented to ensure a more timely review of charts. In an effort to keep the chart as informative as possible, a clinical trials indication was placed on the tab of the chart folder to readily identify patients on a trial. The staff, as part of daily routine in this area, now use and add information to the enrolment and case registration screens of the computer system. On a yearly basis, approximately 52,000 charts were handled and processed for both clinic and treatment visits; this includes requests and surveys.

Medical Secretarial/Medical Stenography

Staff in this area, of which there are 6 secretaries and one part-time steno, continued to transcribe all notes generated from patient visits; the volume of lines transcribed showed a steady increase (approximately 300,000 lines per fiscal year). The secretaries role expanded with the addition of a computer terminal to their area, and this is accessed regularly as part of their daily routine.

In order to avoid the total 'open effort' of secretarial areas, as well as to assist with noise level, privacy screens were installed.

Word processing and central dictation are under review as possible improvements from both a secretarial and chart-related typing aspect.

Provincial Cancer Registry

During the 1985-86 fiscal year period, there were 4,205 completed Registry forms received, as well as 7,271 Pathology Reports which represents a continued improvement in our receiving current data: 1,832 charts were updated with death information received weekly from the Vital Statistics Department.

The publication of the 1983 and 1984 Provincial Cancer Incidence Report was finalized and statistical presentations/tables remained the same; it is planned that this will be the last separate incidence report of that nature and future Registry Incidence statistics will be combined with the Foundation's Annual Report.

Plans were ongoing to reactivate the letter follow-up procedure, in order to keep current statistics on patients' disease status. Additional clerical staff resources will be required before such a program can be considered.

Registry staff were also involved in the finalization plans for the start of the pathology report study being done to test the usefulness of pathology reports for providing information about cases that would not otherwise be registed and improving timeliness of information on cancer cases.

The Registry has made great strides in being able to provide incidence statistics on a much more current basis (one year behind).

One Health Record Administrator and one clerk-typist work in the Registry on a daily basis.

DEPARTMENT OF MEDICAL ONCOLOGY

Head: Dr. D.F. White, M.D., F.R.C.P.(C), Medical Oncologist
Dr. R. Wierzbicki, M.D., F.R.C.P.(C) Medical Oncologist

Medical Oncology manpower continues to grow, allowing increased involvement of the department in the service, research, and educational function of the Foundation.

Service

The process of subspecialization of the service function, so important in the realization of the missions of the Foundation, has continued with the arrival of Dr. Vandenberg. Medical Oncologists have now been designated with special expertise in Thoracic Oncology, Carcinoma of the Breast, Carcinoma of the Head and Neck, Sarcomas, Lymphomas, and Urological Cancer.

The arrival of the 4th Medical Oncologist, Dr. McCormick, with a special interest in Gastrointestinal Malignancy, will potentiate development in that important and common group of malignancies.

The department continues to supply an important consultative service in the three Halifax hospitals. This provides an important presence of the Foundation in the three hospitals including access to the Foundation for patients requiring specialized cancer care.

Within the Victoria General Hospital, the guest hospital for the Foundation, the fragmentation of service and lack of unit, continues to impede the ideal interaction of the hospital and the Foundation Clinic and the provision of the most efficient care for patients.

Dr. Shea, functioning as a clinical associate with Medical Oncology patients has been, with application of her not inconsiderable skills, a major influence in minimizing the disruptions for patients as they flow between the clinic and the hospital to receive their cancer care.

Outside of Halifax, the department continues to play a major role in the Outreach Program as it applies to continuing care for patients in their own community. With the continuing cooperation of the local physicians and surgeons, this important area of development has been strengthened by both clinical trials development and the process of continuing medical education in which the department participates.

The Medical Oncology activities as a consequence of the growth of the number of Medical Oncologists within the Halifax Clinic, has intensified pressure on the facility which occassionally leads to difficulties in function. Further development of site orientated clinics in which Medical Oncology has played a major role may well lead to efficiencies of scheduling which can relieve some of that pressure.

The service function of Medical Oncology would be seriously compromised without the excellent support of the Department of Nursing in particularily that department's involvement in cancer chemotherapy administration and patient education concerning this important treatment modality.

The Outpatient Constant Infusion Chemotherapy Program using portable pumps is an example of the cooperative program development which is possible.

Research

The Cancer Foundation has augmented the clinical trials capability of the Foundation by development of a Clinical Trials office manned by a Clinical Trials Data Manager, and Clinical Trials Nurse. Dr. Ted Vandenberg has assumed the role of Medical Coordinator of the unit which is administered by the Department of Medical Oncology.

The development of the office has led in the past year, to an increase in both the number of trials activated and the quality of data collected. A site review of the office's function has now been completed by the National Cancer Institute of Canada.

The office and the physicians who utilize the office now constitute a major player in the National Cancer Institute of Canada's clinical trials effort. Dr. R. Wierzbicki has been appointed to the Investigational New Drug Committee of the National Cancer Institute of Canada. He is also chairman of the Kidney Cancer Study Committee and a member of the Lung Cancer Committee. Dr. White is a member of the Myeloma Committee and of the Quality Assurance Committee of the Clinical Trials Program.

To satisfy the needs of the unit to be in the main economically self sufficient and to allow for early access of new drugs for patients, there has been an increased level of involvement in clinical trials sponsored by the Pharmaceutical Industry. Dr. White is appointed to the Research Advisory Group of Adria Laboratories of Canada, a company with interest in Canadian research and development in cancer care. Important financial support of clinical research has been forthcoming from a number of other firms including Bristol Myers, Ciba, ICI, Lederle, Schering, etc. This financial support in times of restraint by Government continues to be appreciated by those involved in clinical cancer research.

Education

The Department has been involved in a number of educational pursuits.

A. MEDICAL

1. Undergraduate
2. Post Graduate
   a) Hematology/Medical Oncology Division Department of Medicine, Dalhousie University

      Residents from the Dvision are invovled in patient management both in a consultative role in the Halifax hospitals and also within the Halifax Clinic. It is expected that this role will expand.

   b) Medical Education.

      Dr. White has visited with physicians and surgeons in Amherst, Annapolis Royal, Antigonish, Bridgewater, Kentville, Inverness, Sheet Harbour, and Yarmouth discussing cancer care, cancer chemotherapy, and Medical Oncology.

   c) Guest Speakers

      The Department has played a role in cooperation with the division of Hematology/Medical Oncology, Department of Medicine, and the Department of Radiation Oncology, often with the financial assistance of Pharmaceutical sponsors in bringing important guest speakers to the Foundation and to Halifax.

B. NURSING

The Department initiated the process of education for nursing in cancer chemotherapy. This process and the subsequent accreditation from the Registered Nursing Association of Nova Scotia is utilized both within the Foundation per se and also within the province to provide the important cadre of nurses with expertise in cancer chemotherapy so important both for the Cancer Foundation Clinic and the province, so that high quality cancer chemotherapy can be administered.

Thirty-three nurses have been trained within the province and sixteen within the clinic.

C. ADMINISTRATION

1. The Free Drug Program sponsored by the Department of Health for the funding of intravenous cancer chemotherapy agents to designate hospitals, is administered by Dr. White.
2. The process of standardization of chemotherapy treatment programs used within the Foundation is an ongoing process which will hopefully lead to a published documentation of that policy.
3. Clinical Trials Office.

D. FUTURE

From a single Medical Oncologist in 1983, the Department has, with the support of the Board and the Department of Health, continued to grow. With the arrival of a fourth Medical Oncologist in January of 1987, the critical mass for a viable Department with full potential to provide service leadership, clinical research involvement and important educational focus will exist.

Medical Oncology within the Foundation is now well founded and continued growth is expected.

MEDICAL PHYSICS DEPARTMENT

DIRECTOR
Dr. John Aldrich

SENIOR PHYSICIST
Dr. John Andrew

PHYSICISTS
Mr. Fan-Shih Chen
Mr. Cupido Daniels
Mr. Narayan Kulkarni
Dr. Stuart Jackson

ASS/T RADIATION SAFETY OFFICER
Mrs. Pauline Jones

SECRETARY
Mrs. Sandra Fox

TREATMENT PLANNING TECHNOLOGISTS
Mrs. Joleen Orr
Mrs. Linda Purcell

MACHINIST
Mr. Ian Porter

RADIUM CURATOR
Mrs. Peggy Wilson

MOULD ROOM ASSISTANT
Mrs. Pauline Benoit

ELECTRONICS TECHNOLOGIST
Mr. George Matthews

Quality control is an important part of the work of the Medical Physics Department, and it is mainly directed to ensure that the correct treatment radiation dose is given to the patient. For the treatment machines the radiation output is measured for all radiation beams frequently enough to ensure consistency. For example, for the largest accelerator, the Therac 25, which produces 9 different radiation beams, measurements are made three times per week. For the Cobalt-60 machines the same measurement only needs to be done monthly. Checks are also made on all the machines on a daily basis to ensure that all safety devices are operational. All equipment is serviced at least three months in line with manufacturers' specifications, and components replaced as necessary. Unforeseen downtime is, therefore, kept to a minimum.

The only major equipment which has needed extra servicing is the TherX simulator. Most of the electronics have already been replaced and much of the wiring will soon have to be replaced. The optical system which allows fluoroscopy will have to be replaced shortly and it is clear that we need to make plans to replace the complete simulator device in the near future.

For the last few years there has been extensive research on the absolute calibration to be used for radiotherapy treatment machines, and this has culminated in a new dosimetry protocol. After extensive investigations the Clinic adopted this new protocol on January 1, 1986. Although this means only a change of about 1% in dosimetry, it is important that the Clinic remains comparable to other clinics in the world.

The advent of new radiation oncologists has led to the development of new techniques and devices in which the department was happy to collaborate. These included anterior compensator treatment fields for the treatment of Hodgkin's Disease and a new optical device for the setup of tangetial breast treatments. Our automated densitometry system was also interfaced to a computer to allow accurate measurements to be taken for our range of electron beams. A standardized collimator accessory system which facilitates the transfer of patients between the simulator, linacs and cobalt units was built in our machine shop and installed.

For the first time in the Foundation's history the Medical Physics group was awarded two major research grants from national research bodies. This is the combination of years of effort and is even more gratifying given the shortage of research funds these days. The first project to be funded was the work on the use of dental enamel as a radiation dosimeter. This work was awarded grants of $52,000 over two

years by the Medical Research Council of Canada and $2,300 from the Dalhousie Medical Research Foundation. The second award is the result of several years of collaboration between the Medical Physics Department, Dr. Filbee, and the ultrasound group at the Technical University and the Physics Department at Dalhousie University., This group was awarded $210,000 over three years for the development of an ultrasound tomography system to provide information on the temperature inside the body, especially as it relates to hyperthermia, a new form of cancer treatment. The CTRF also provided $14,000 to initiate this work. At present, much of this work is carried out at the universities but, as the work progresses, it is clear that the Foundation will have to provide space for the evaluation of the system in animals and man.

As always we were sorry to see one of our staff members leave. Mr. Jed Schroeder left us to join the Medical Physics group at the London Clinic of the OCTRF.

Staff was involved in a number of national meetings and conferences and the following articles were published by the group during this year:

1. Andrew, J.W., L. Eapen and N.S. Kulkarni, "Homogeneous Irradiation of the 'Short-Necked' Laryngeal Cancer Patient", Int. J. Radiation Oncology Biol. Phys. 10, p. 549, (1984).
2. Andrew, J.W., and Aldrich, J.E. A Microprocessor-based Radiotherapy Beam Flatness Monitor. Proc. IEEE 8th International Conference on Computers in Radiation Therapy, IEEE Computer Society Los Angeles, CA, 1984, p. 437.
3. Aldrich, J.E. and Andrew, J.W. A Microcomputer Upgrade for Radiotherapy Simulation. Proc. IEEE 8th International Conference on Computers in Radiation Therapy, IEEE Computer Society, Los Angeles, CA, 1984, p. 439.
4. Aldrich, J.E. Nova Scotia Pioneers in Radiology. Canadian Medical Journal, 131, 376, 1984.
5. Andrew, J.W., Aldrich, J.E., O'Brien, P.F. and Michaels, H.B. Characteristics of the AECL Therac 25 Photon and Electron Beams. J. Medical Physics 11, 401, 1984 (abstract)
6. Aldrich, J.E. An Improved Backpointer for Isocentric Radiotherapy Machines, Journal of Medical Physics 11, 559, 1984.
7. Aldrich, J.E., Flexible Applicators for the Treatment of Carcinoma of the Cervix with the Selectron, Brachytherapy 1984, p. 145.
8. O'Brien, P., Gillies, BH., Aldrich, JE., and Andrew, J.W. Radiation Protection Aspects of a New High Energy Linear Accelerator, Journal of Medical Physics, 12, 101, 1985.
9. Pass, B. Aldrich, J.E. Dental Enamel As An In Vivo Radiation Dosimeter, Medical Physics, 12, 305, 1985.
10. Aldrich, J.E., Andrew, J.W., Michaels, H.B. and O'Brien, P. Characteristics of the 25 MV Photon Beam From a New 25 MV Linear Accelerator, Journal of Medical Physics, 12, 619, 1985.
11. Aldrich, J.E., Doctor Charles E. Puttner - Pharmacist Extrordinaire, Canadian Pharmaceutical Journal 12, 574, 1985.
12. O'Brien, P., Michaels, H.B., Aldrich, J.E. Andrew, J.W., Characteristics of Electron Beams From a New 25MV Linear Accelerator, Medical Physics, 12, 799, 1985.
13. Electrooculography
    S.A. Jackson
    In: Encyclopaedia of Physics in Medicine and Biology Ed. T.F. McAinish, Pergamon Press, pp. 314-316, 1985.
14. The Renal Washout Parameter as an Indicator of Transplant Rejection.
    S.A. Jackson, L. Ehrlich, R.H. Martin
    In: European Journal of Nuclear Medicine 12: 86-90 1986
15. Schaber, C.W., Andrew, J.W., Aldrich, J.E. and Fay, D. An Economical Conversion of a Drilling Machine from Manual to Numerical Control for the Manufacture of Compensating Filters in Radiation Therapy. Proceedings of the XIVICMBE and the VII ICMP, Espoo, Finland 1985.

PRESENTATIONS

1. Evaluating the Contrast Capability of Image Intensifiers - C. Daniels, W. D. Burgess - 70th Assembly of the Radiological Society of North America - Washington, D.C. November, 1984.
2. Generator Malfunctions Detected during Acceptance Testing - C. Daniels. Annual Scientific Meeting, Atlantic Provinces Radiologists - October, 1984.
3. The Film-Screen selection experience of the V.G.H. - D. Daniels, G.P. LeBrun - Annual Scientific Meeting, Atlantic Provinces Radiologists - October, 1984.
4. The Renal Washout Parameter as an Indicator of Transplant Rejection
   S.A. Jackson, R.H. Martin, L. Ehrlich.
   Society of Nuclear Medicine, Los Angeles, 1984.
5. Analysis of the Radioisotope Renogram by Deconvolution Analysis
   S. A. Jackson
   Society of Nuclear Medicine, Los Angeles 1984.
6. Telemedicine-An Overview
   S.A. Jackson, R. H. Martin
   Presented to Atlantic Provinces Radiologists Annual Scientific Meeting, 1984.
7. Positron Emission Tomography.
   S.A. Jackson
   Presented to Atlantic Nuclear Medicine Society 1984.
8. Andrew, J. W. and Aldrich, J.E., "A Microprocessor-based Radiotherapy Beam Flatness Monitor, IEEE Conference Computers in Radiotherapy, Toronto, July, 1984.
9. Aldrich, J.E. and Andrew, J.W., "A Microcomputer Upgrade for Radiotherapy Simulators", IEEE Conference Computers in Radiotherapy, Toronto, July, 1984.
10. Aldrich, J.E., "Flexible Applicators for the Treatment of Carcinoma of the Cervix with the Selectron", 3rd. International Selectron Users Meeting, October 15-17, 1984.
11. Aldrich, J.E., "Physics of Magnetic Resonance Imaging", MRI Symposium, Halifax, December 3, 1984.
12. O'Brien, P., H.B. Michaels, J. Andrew and J. Aldrich, "Radiation Protection Aspects of a New High Energy Linear Accelerator, ASTRO, (1984)
13. Andrew, J. and J. Schroeder, Whole Body Electron Treatments Using a Computer Controlled Scanned Beam, Canadian Assoc. of Physicists Congress, Fredericton, (1985).
14. Schaber, C.W., Andrew, J.W., Aldrich, J.E. and Fay, D., "An Economical Conversion of a Drilling Machine From Manual to Numerical Control For The Manufacture of Compensating Filters in Radiation Therapy", XIV International Conference on Medical and Biological Engineering, VII International Conference on Medical Physics, Espoo, Finland, August, 1985.
15. Aldrich, J.E. and Pass, B., "Dental Enamel As An In Vivo Dosimeter" American Association of Physicists in Medicine, 27th Annual Conference, Seattle, August, 1985.

NURSING DEPARTMENT

Supervisor: Virginia Teasdale
Jean Dickson (February 1986)

R.N.'s:
Virginia Bradford
Jasmine Buisseret
Anna Cake
Trudy Gordon
Anne Hammer
Barbara Grant
Ramona MacAskill
Beverly Pierce
Wanda Raworth
Margo Stewart
Luella Woods

CNA's:
Helena Burrell
Bonny Osgood

Unit Clerk: Susan Trask

Unit Aide: Beverly Pippy

During 1985 the Nursing Department continued to focus it's energy toward the patients and their families, working together with other health professionals to provide optimal physical and emotional support.,

In October 1985 Virginia Teasdale resigned from her role as Nursing Supervisor. Virginia had served in this role since the CTRF was founded in 1982 and promoted a progessive and caring philosophy within the department. The nursing staff would like to thank Virginia for her dedication to the development of the Nursing Department from 1983 until 1985 and to wish her success in her future endeavors. Anne Hammer assumed the role of Acting Supervisor following Mrs. Teasdale's resignation.,

In February 1986 the organizational structure of the Nursing Department was modifield. The position of Nursing Supervisor was eliminated and two new positions - Director of Nursing and Head Nurse were created. Jean Dickson was appointed to the position of Director of Nursing and Anne Hammer to an Acting Head Nurse position.

Objectives 1986.

- To provide staff development through inservices and continuing education.
- To help patients and their families develop an understanding of cancer and it's treatment by developing and evaluating patient education.
- To develop nursing policies and procedures encompasssing ongoing evaluation and revision.
- To initate nursing research aimed at improving patient care.

DEPARTMENT OF RADIATION ONCOLOGY

HEAD, DEPARTMENT OF RADIATION ONCOLOGY
D. H. Thomson, M.B., Ch.B., D.M.R.T., F.R.C.P.(C), F.A.C.R.

RADIATION ONCOLOGISTS
R. M. Cunningham, M.D., D.M.R.T., F.R.C.P.(C)
J. F. Filbee, M.B., B.S., D.M.R.T., F.R.C.P. (C)
O.S. Wong, M.D., F.R.C.P.(C)
B. H. Jo, M.D.
K. Singapuri, M.D.

CLINICAL ASSISTANT
C. Shea, M.D.

During the year April 1, 1985 to March 31, 1986 the Department of Radiation Oncology has been fortunate in obtaining the services of Dr. K. Singapuri who was trained in the Princess Margaret Hospital, Toronto and joined our staff on July 1, 1985. He has proved to be a valuable addition to our depleted ranks. The search continues to bring the strength up to the necessary level for continued quality care.

The radiation therapy equipment is all of superior quality and is adequate for our needs.

Since the installation of the linear accelerators the complexity of treatment has increased necessitating more planning time for each patient, increasing the amount of time that has to be spent on each patient and resulting in an additional strain on our already hardpresed staff. Despite this, the Radiation Oncologists have continued to participate in joint consultative clinics with the Divisions of Gynecology, Otolaryngology, Dermatology and Surgery. A Radiation Oncologist is available at all times for joint consultation during daily clinics conducted by the divisions in the Foundation.

The Radiation Oncologists also serve as the Department of Radiation Oncology of the Victoria General Hospital where they care for patients on their own service and provide treatment to patients under the care of other hospital departments. Consultative service is provided on a daily basis to the Halifax Infirmary, the Izaak Walton Killam Hospital, Camp Hill Hospital, the Civic Hospital, the Dartmouth General Hospital and the Canadian Forces Hospital.

Every patient undergoing curative treatment is discussed in detail at weekly planning rounds thus maintaining high quality treatment and performing a continuous audit.

All members of the department are involved in the National Cancer Institute clinical trials and funded pharmaceutical company protocols. Their association with the National Childrens Study Group continues and Dr. O.S. Wong is the pediatric Radiation Oncologist working with the Pediatricians in the Izaak Walton Killam Hospital. Dr. J. F. Filbee continues to be involved, in association with Dr. George Konok, in hyperthermia research centered in the Halifax Infirmary.

Involvement in teaching in the Faculty of Medicine is not as great as one would like to see. Lectures are given to undergraduate medical students, interns, and resident teaching and electives are available for both undergraduates and interns. We continue to cooperate with the Faculty of Dentistry providing a rotation through the Cancer Foundation treatment for final year dental students.

Members of the department serve on committees of the Canadian Association of Radiologists, the Canadian Oncology Society, the Royal College of Physicians and Surgeons of Canada and several federal health committees. In the past year several members have been appointed to committees of the National Cancer Institute of Canada. We are also well represented on the committees of the Victoria General Hospital and the Faculty of Medicine, Dalhousie University.

SCHOOL OF RADIATION THERAPY

INSTRUCTOR:	Janet Garrison
GRADUATE:	Wendy MacNaughton
SENIOR STUDENTS:	Cathy Usher
	Paula Ellsworth
JUNIOR STUDENTS:	Carol-Anne Jennex
	Helen Phelan
	Elizabeth Kerwood

The training program for Radiation Therapy technologists remains at 24 months commencing in September of each year. The total student enrollment (seniors and juniors) has been increased from five to six students.

The program is divided into clinical and theoretical. The theoretical portion of 24 weeks' duration is divided into three sessions; students attend these didactic sessions at the School of Radiotherapeutic Technology in Toronto. The clinical training plus supplementary didactic sessions are received at the Halifax Clinic.

In April 1985, Mrs. Garrison attended the Annual Liaison Committee Meeting (Ontario Cancer Foundation and Affiliate Clinics) at the Princess Margaret Hospital, Toronto. This meeting enables participating clinics to have direct input to the didactic teaching program offered at the Princess Margaret Hospital and affords the opportunity for the relevant exchange of ideas on training. Prior to this meeting, Mrs. Garrison attended a one day seminar on the topic of - "Student Selection and Student Interviewing Skills".

The students attended the Spring N.S.S.M.R.T. Education Seminar held at the Dartmouth General Hospital on May 2 and 3rd The N.S.S.M.R.T. therapy student essay competition was won by Jean MacDonald. Jean's paper entitled "Nutrition and the Cancer Patient" was presented at the seminar.

In May 1985, the senior class was reduced to only one student as Jean MacDonald decided to leave the program.

During September 1985, Wendy MacNaughton graduated from the training program, sucessfully completed the C.A.M.R.T. examinations and was welcomed to the staff of the Technical Department.

The students entering the program in September 1985 were introduced to the "Student Clinical Evaluation" which replaces the yellow log book which had become outdated after several years of use; a very positive addition to all therapy training programs.

A brochure for our "Radiotherapy Training Program" was designed during the year and released from the press in October. As a result, career information may be presented to perspective students more efficiently.

The student selection process commenced in January with the screening of approximately 90 applications. Of these, 35 met the academic pre-requisites and were requested to come for a personnal interview. The three students exhibiting the greatest potential for success were accepted into the September 1986 training program.

The SCAT testing was introduced into our selection process this year as a means to standardize the different levels of academic achievement provincially. In an effort to determine more precisely the usefulness of these tests, the results will be compared to school marks, training program marks and C.A.M.R.T. results over the next few years.

Skin Neoplasm Clinic

The Skin Neoplasm Clinics have continued to function once weekly throughout the year attended alternately by Drs. J. Klotz and J.B. Ross except when one of the attendants has been out of town, on vacation, etc. During these clinics, a dermatology resident has always been present for educational purposes.

The total number of patients seen from 1 April 1985 to 31 March 1986 was 325.

Dr. J. Klotz has replaced Dr. J.B. Ross as clinical coordinator. Dr. J.B. Ross represents the Department of Medicine on the Medical Executive Committee.

For this annual report to be of value, it is essential in the future to have detailed statistical breakdowns. Each clinician should have the number of patients seen by him or her, their age, sex, diagnosis, management whether surgical or conservative. I hope it will be possible to develop this type of statistic for use in future annual reports.

DERMATOLOGY SECTION (1984-85)

The Skin Neoplasm Clinic has continued in the same format as the previous years, namely one weekly session attended alternately by Drs. J.B. Ross and J. Klotz with a dermatology resident. The association with Drs. M. Cunningham, Radiotherapist, and S. Norvell, Surgeon, has continued. The redisposition of the staff room with dictating facilities has improved the physical association with other specialists such as the medical oncologists who work nearby.

There has been further successful experience with the electron beam treatment of mycosis fungoides and the initial results appeared comparable to other centres.

There is an increasing demand for the services of the clinic. This will ultimately require the opening of a further clinic and this in turn would be dependent on the recruitment of more dermatologists.

Statistics

From April 1984 to March 1985:

Dr. J.B. Ross	Total	191
Dr. J. Klotz	Total	107
		298

The senior students did rotation to the Radiology, Nuclear Medicine and Cytotechnology Departments of the Victoria General Hospital to observe the procedures used in other disciplines associated with the cancer patient. Also, the students from these departments spent a day observing technical procedures at the Halifax Clinic.

Continuing Education Seminars within the Cancer Foundation such as:

- monthly Medical Physics seminars
- monthly Technologist sessions with the Physics Department to exchange and communicate development of new techniques
- weekly Nursing seminars
- special lecture presentations

have proved very beneficial to students and staff of the training program.

Technical Department

Chief Technologist	Lynda Burgess	
Supervisor	Marlene Smith Carlene Wagner	
Technologists	Bonnie Eldershaw Kim Day Nancy Alexander Debra Sawatsky	Gwen Cottreau Christie Stevenson Maureen Urquhart

The treatment area provides radiation services to an average of 90 patients daily, either on an outpatient or an inpatient basis. These patients are treated with cobalt or linear accelerator radiation units by the technologists under physician prescription.

The technologist have introduced to their role of patient caring "Graduation Day" for children. Upon completion of therapy, an impromptu ceremony is held. This consists of a graduation cap and diploma, pictures, presents and a cake. Family, patients and staff enjoy these special moments given in sharing together.

Communication between hospital nursing floors has improved with the introduction of the "Record of Patient's Treatments". Medical staff can readily identify type of radiation given, site of treatment, commencement/completion of treatment and patient progress in the treatment. The English/French pamphlet, "Instructions for Patients Receiving Radiation Treatments", has assisted patients, family and medical staff in preparation for therapy. Fears and anxieties can be identified and minimized. To enhance public awareness and education reviews are held with the radiation oncologists which technologists are invited to attend.

With radiation oncologists, physicists and technologists working together, there has been development of the isocentric treatment of carcinoma of the breast using half block technique, spinal cord shielding protocol, and the introduction of compatible shielding tray for the units. The unit quality assurance and radiation safety has been revised providing maximum protection to staff and patients.

The Technical Department looks forward to participating in future developments and goals - complete care for the cancer patient.

ANNUAL REPORT

PROVINCIAL CANCER REGISTRY

January 1, 1984 to December 31, 1984

January 1, 1985 to December 31, 1985

PROVINCIAL CANCER REGISTRY

Dr. D.H. Thomson	Director
Mrs. T. Croucher	Head, Health Records
Staff	Jean James Clerise Smith Rosalee Walker

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PRIMARY SITES WITH AGE BREAKDOWN (MALE - 1985)

SITE	ICD-O CODE	AGE BREAKDOWN 0 - 9	10 - 19	20 - 29	30 - 39	40 - 49	50 - 59	60 - 69	70 - 79	80 - 89	90 +	NOT AVAL	TOTAL
Lip	140				3	1	7	6	4	2	1		24
Tongue	141					2	3	7	4				16
Rest of Mouth	142-145				2	5	6	7		2		1	23
Pharynx and Tonsil	146-149			1	1	1	2	3	1				9
Esophagus	150					3	5	12	5				25
Stomach	151				1	1	13	18	17	7	2		59
Small Intestine	152							1					1
Colon - Rectum	153-154				5	13	31	80	94	35	7		265
Liver, Gallbladder	155-156				1	1	1	1	5				9
Pancreas	157		1			3	2	11	10	10	1		38
Peritoneum; Retroperitoneum & Other Digestive System	158-159						2			1			3
Nasal Cavities; Accessory Sinuses, Middle and Inner Ear	160							1	1				2
Larynx	161						3	10	10				23
Trachea, Lung Bronchus, Pleura	162-163				1	11	75	133	123	28	3		374
Thymus, Heart, Mediastinum	164						1	1					2
Bone Marrow (Includes Leukemia and Plasma Cell Tumors	169			3	2	1	13	22	12	8			61
Bone, Connective and Other Soft Tissue	170-171	1	1	4		3		2	2	3		1	17
Skin (Includes Melanomas)	173			6	29	56	121	183	200	80	13	19	707
Breast	175					1	1	2	1				5
Prostate	185					2	16	70	123	51	11	3	276
Testis	186		1	7	5	1						1	15
Penis and Other Male Genital	187					2	1	3	1				7
Bladder	188					6	23	35	40	15	4	1	124
Kidney and Other Urinary	189			1	1	3	7	15	14	6			47
Eye and Lacrimal Gland	190				1		2	2					5
Brain, Nervous System	191-192		2	1	2	2	6	4	1				18
Thyroid and Other Endocrine	193-194	1		2	1	1	3	2	2				12
Other Ill Defined Sites	195							1					1
Lymph Nodes	196	1	2	10	6	7	11	13	10	4		2	66
Unknown Primary Site	199				2	3	11	16	14		1	1	48
TOTAL		3	7	35	63	129	366	661	694	252	43	29	2282

PROVINCIAL CANCER REGISTRY OF NOVA SCOTIA

PRIMARY SITES WITH AGE BREAKDOWN (FEMALE - 1985)

SITE	ICD-O CODE	AGE BREAKDOWN 0 - 9	10 - 19	20 - 29	30 - 39	40 - 49	50 - 59	60 - 69	70 - 79	80 - 89	90 +	NOT AVAL	TOTAL
Lip	140												0
Tongue	141						1						1
Rest of Mouth	142-145			1	1	1		3	2	5			13
Pharynx and Tonsil	146-149				1				1				2
Esophagus	150							2	1	4	1		8
Stomach	151					1	2	6	13	10	1		33
Small Intestine	152					2	1	3	1	1			8
Colon - Rectum	153-154				5	10	47	60	84	50	11		267
Liver, Gallbladder	155-156			2		1	1	3	10	3			20
Pancreas	157					2	2	11	12	1	1	1	30
Peritoneum; Retroperitoneum & Other Digestive System	158-159				1								1
Nasal Cavities; Accessory Sinuses, Middle and Inner Ear	160						2						2
Larynx	161					1	1	2	1	1			6
Trachea, Lung, Bronchus, Pleura	162-163				1	8	39	44	37	9	1		139
Thymus, Heart, Mediastinum	164												0
Bone Marrow (Includes Leukemia and Plasma Cell Tumors	169	3		1	1	1	9	7	8	8			38
Bone, Connective and Other Soft Tissue	170-171	1	1	2	2	2	1	2	1	2	3		17
Skin (Includes Melanomas)	173		2	17	35	53	82	127	138	74	16	14	558
Breast	174			3	28	58	85	118	85	36	8	4	425
Cervix Uteri	180			127	85	34	8	10	8	4	1	1	278
Corpus Uteri	182				6	7	25	32	20	5		1	96
Ovary, Fallopian Tube, Broad Ligament	183			1	6	8	20	14	12	3			64
Other Female Genital	184			2	2	1	2	6	4	4			21
Bladder	188				1	1	7	12	17	7	2		47
Kidney and Other Urinary	189	1					5	6	11	3		1	27
Eye and Lacrimal Gland	190				1	2			1				4
Brain, Nervous System	191-192	1		1	2	2	1	10	4	1			22
Thyroid and Other Endocrine	193-194			3	5	1	2	4	1	2			18
Other Ill Defined Sites	195						1						1
Lymph Nodes	196	1	2	4	4	4	14	11	10	8	1		59
Unknown Primary Site	199			1	1	2	8	12	18	9	1	1	53
TOTAL		7	5	165	188	202	366	505	500	250	47	23	2258

INCIDENCE OF CANCER WITHIN AGE GROUPS PER 1,000 POPULATION

(MALES)

AGE BREAK DOWN	1984		1985	
	ACTUAL # OF CASES	INCIDENCE PER 1000	ACTUAL # OF CASES	INCIDENCE PER 1000
0 - 9 YEARS	8	.1	3	.0
10 - 19 YEARS	14	.2	7	.1
20 - 29 YEARS	30	.4	35	.4
30 - 39 YEARS	43	.7	63	.9
40 - 49 YEARS	119	2.6	129	2.8
50 - 59 YEARS	349	9.3	366	9.8
60 - 69 YEARS	675	20.5	661	20.1
70 - 79 YEARS	664	32.9	694	34.0
80 - 89 YEARS	234	41.9	252	43.9
90+ YEARS	32	191.6	43	286.7
AGE UNAVAILABLE	13		29	
TOTAL	2181	5.1	2282	5.4

PROVINCIAL CANCER REGISTRY OF NOVA SCOTIA

INCIDENCE OF CANCER WITHIN AGE GROUPS PER 1,000 POPULATION

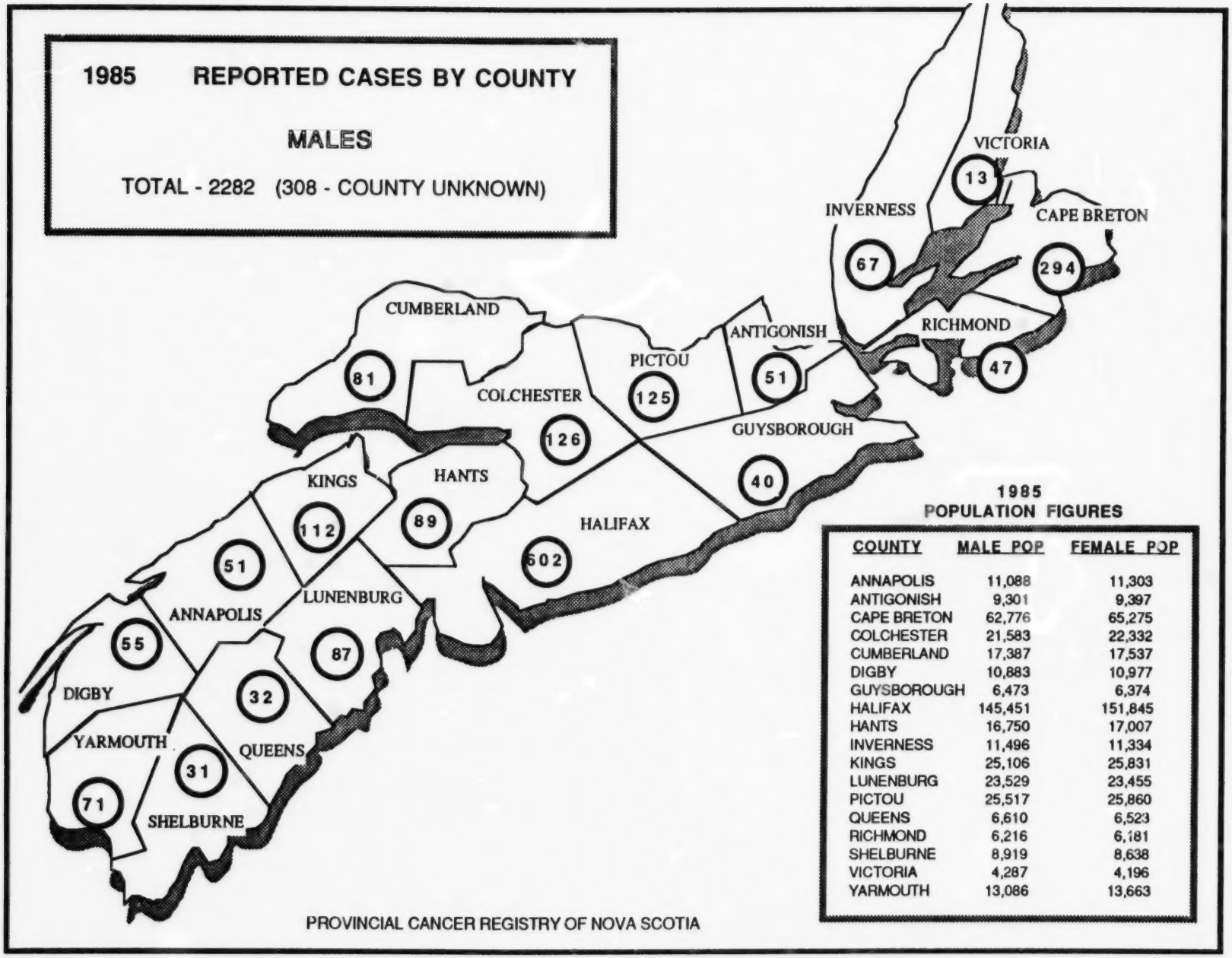
(FEMALES)

AGE BREAK DOWN	1984		1985	
	ACTUAL # OF CASES	INCIDENCE PER 1000	ACTUAL # OF CASES	INCIDENCE PER 1000
0 - 9 YEARS	9	.1	7	.1
10 - 19 YEARS	12	.2	5	.1
20 - 29 YEARS	145	1.8	165	2.1
30 - 39 YEARS	198	3.0	188	2.8
40 - 49 YEARS	180	4.0	202	4.4
50 - 59 YEARS	308	7.8	366	9.3
60 - 69 YEARS	472	12.5	505	13.3
70 - 79 YEARS	478	19.0	500	19.2
80 - 89 YEARS	230	21.8	250	23.4
90+ YEARS	49	106.3	47	89.9
AGE UNAVAILABLE	17		23	
TOTAL	2098	4.8	2258	5.2

PROVINCIAL CANCER REGISTRY OF NOVA SCOTIA

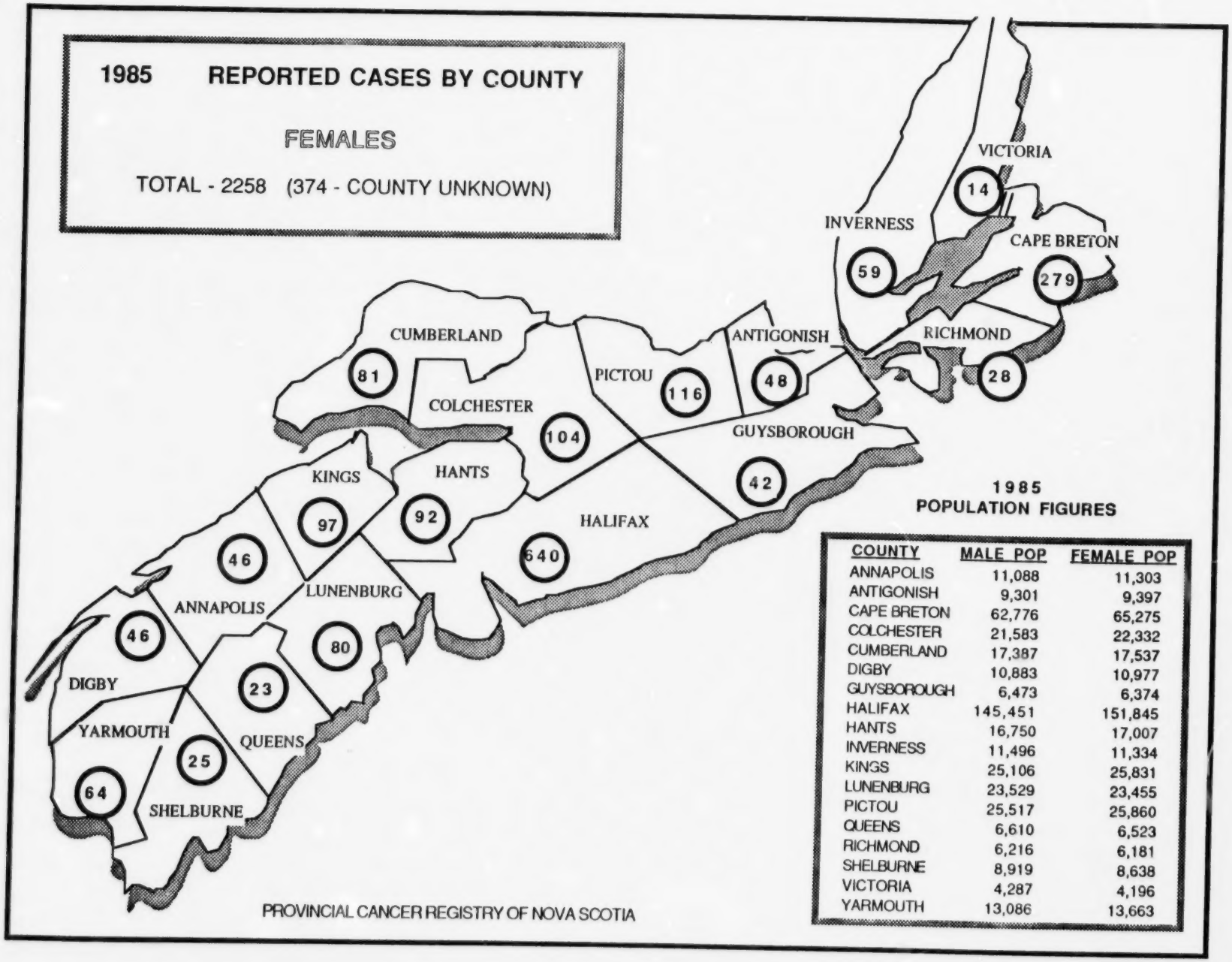
AGE DISTRIBUTION TABLE - PROVINCE OF NOVA SCOTIA

AGE BREAK DOWN	1984			1985		
	MALES	FEMALES	TOTAL	MALES	FEMALES	TOTAL
0 - 9	63,654	60,945	124,599	63,634	61,101	124,735
10 - 19	74,648	70,904	145,552	72,347	68,697	141,044
20 - 29	78,918	78,663	157,581	79,971	79,251	159,222
30 - 39	65,692	66,072	131,764	67,297	68,247	135,544
40 - 49	45,240	44,703	89,943	46,573	45,897	92,470
50 - 59	37,576	39,665	77,241	37,454	39,520	76,974
60 - 69	32,920	37,902	70,822	32,881	37,831	70,712
70 - 79	20,179	25,148	45,327	20,414	26,075	46,489
80 - 89	5,581	10,546	16,127	5,737	10,682	16,419
90+	167	461	628	150	523	673
TOTAL	424,575	435,009	859,584	426,458	437,824	864,282



1985
POPULATION FIGURES

COUNTY	MALE POP	FEMALE POP
ANNAPOLIS	11,088	11,303
ANTIGONISH	9,301	9,397
CAPE BRETON	62,776	65,275
COLCHESTER	21,583	22,332
CUMBERLAND	17,387	17,537
DIGBY	10,883	10,977
GUYSBOROUGH	6,473	6,374
HALIFAX	145,451	151,845
HANTS	16,750	17,007
INVERNESS	11,496	11,334
KINGS	25,106	25,831
LUNENBURG	23,529	23,455
PICTOU	25,517	25,860
QUEENS	6,610	6,523
RICHMOND	6,216	6,181
SHELBURNE	8,919	8,638
VICTORIA	4,287	4,196
YARMOUTH	13,086	13,663



1985 POPULATION FIGURES

COUNTY	MALE POP	FEMALE POP
ANNAPOLIS	11,088	11,303
ANTIGONISH	9,301	9,397
CAPE BRETON	62,776	65,275
COLCHESTER	21,583	22,332
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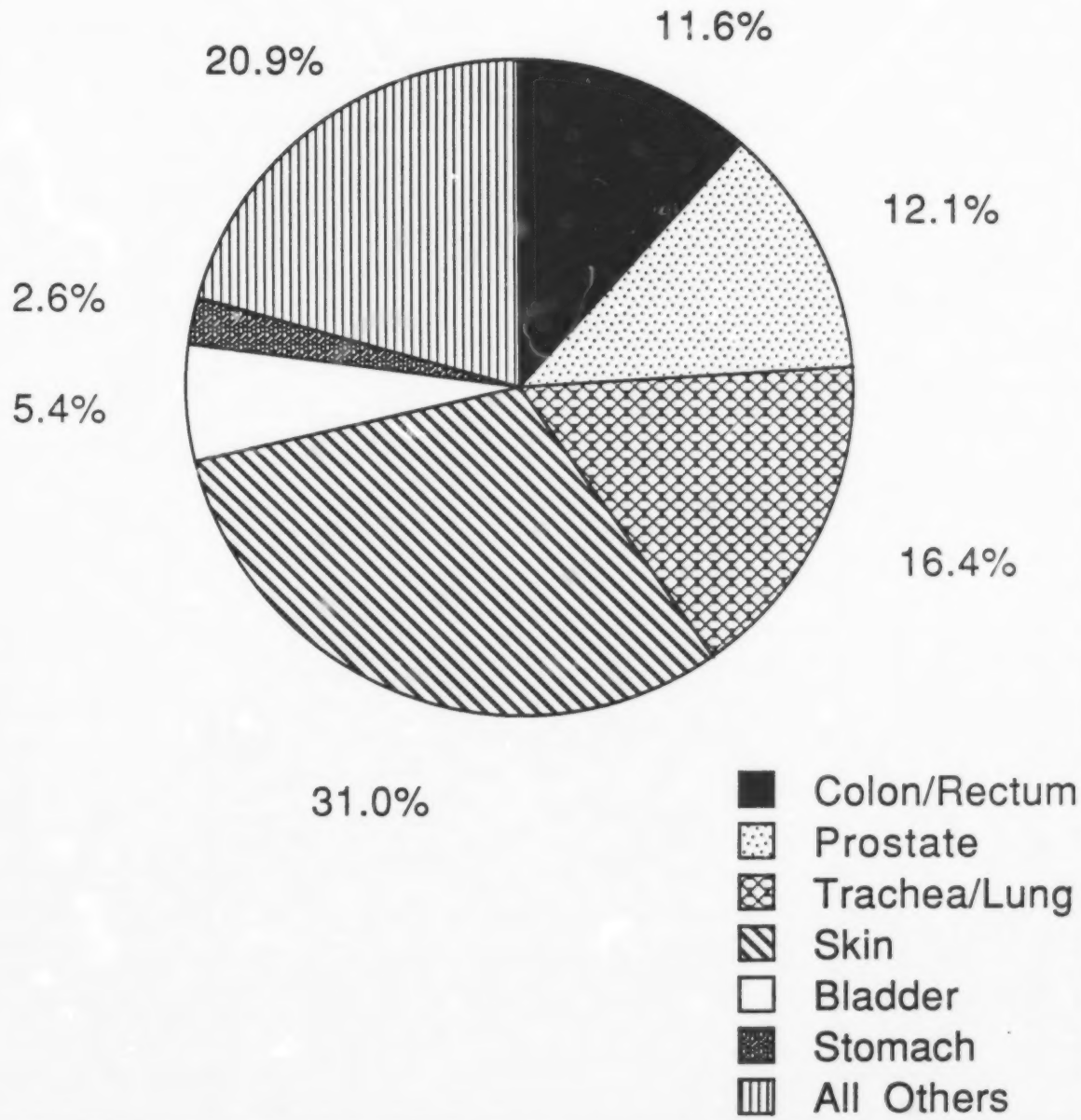
QUEENS	6,610	6,523
RICHMOND	6,216	6,181
SHELBURNE	8,919	8,638
VICTORIA	4,287	4,196
YARMOUTH	13,086	13,663

Major New Primary Sites

Registrations of 1985

MALES (2282)

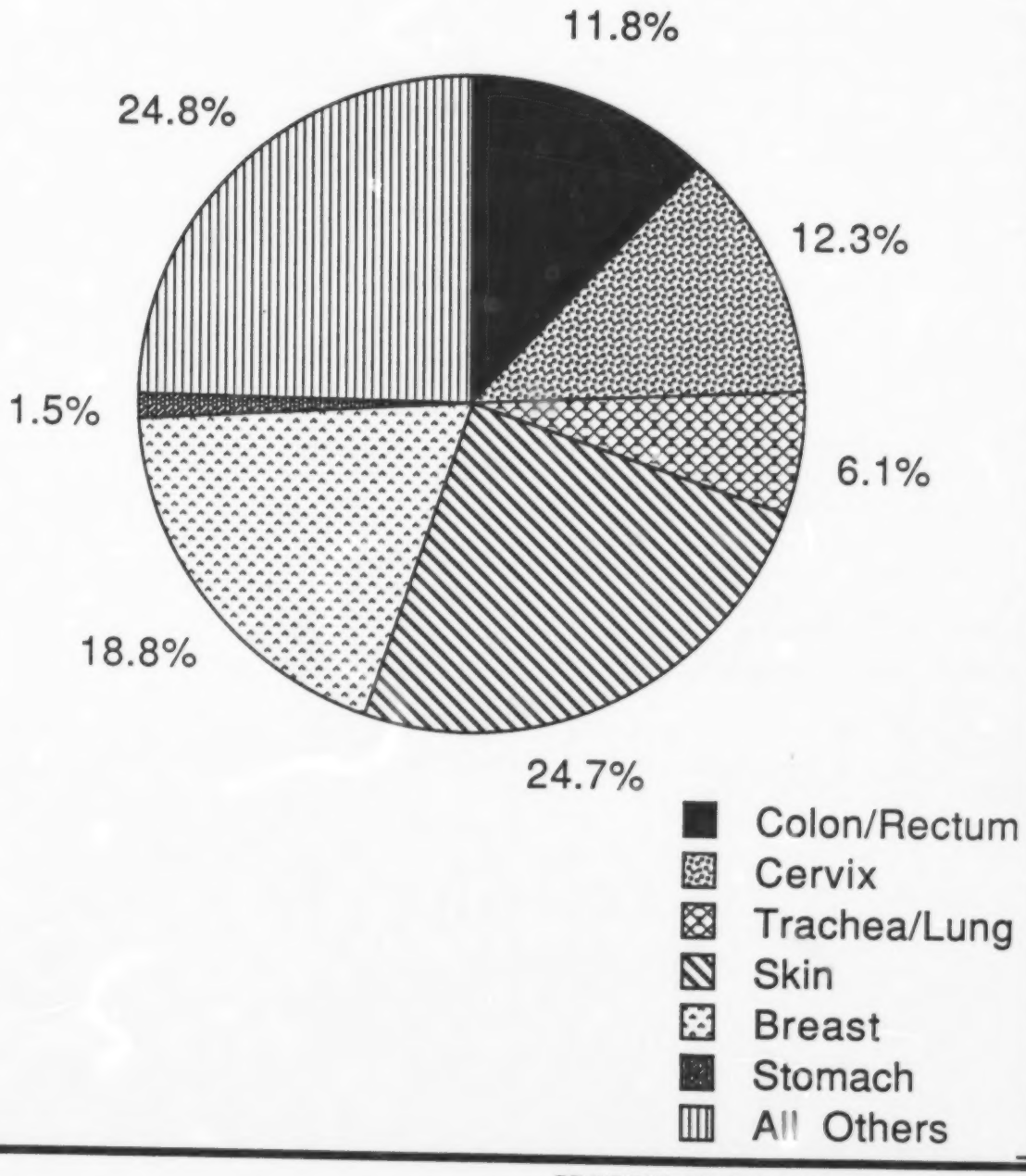


PROVINCIAL CANCER REGISTRY OF NOVA SCOTIA

MAJOR NEW PRIMARY SITES

Registrations of 1985

FEMALES (2258)



PROVINCIAL CANCER REGISTRY OF NOVA SCOTIA

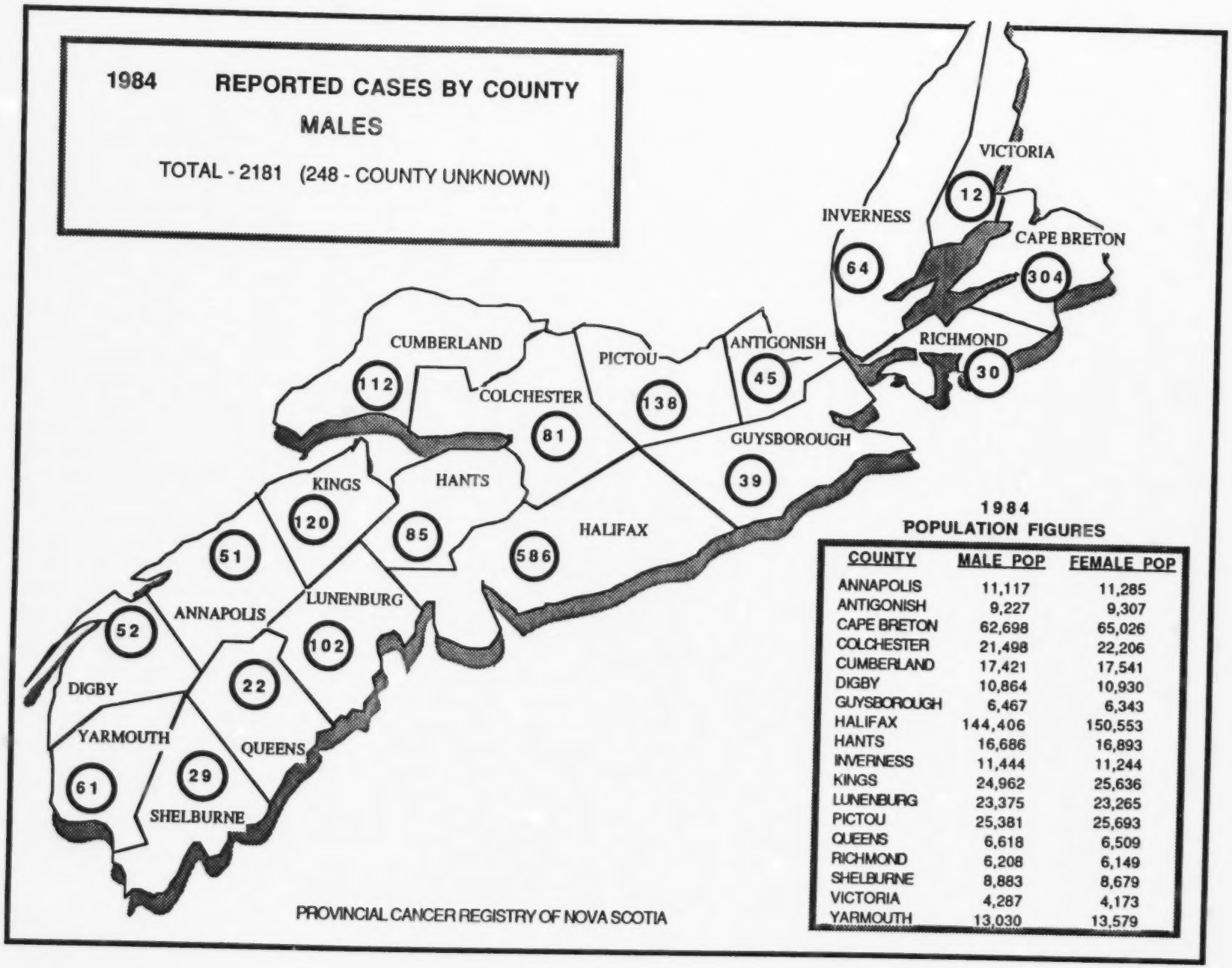
PRIMARY SITES WITH AGE BREAKDOWN (MALE - 1984)

SITE	ICD-O CODE	AGE BREAKDOWN 0 - 9	10 - 19	20 - 29	30 - 39	40 - 49	50 - 59	60 - 69	70 - 79	80 - 89	90 +	NOT AVAL	TOTAL
Lip	140					1	4	9	7				21
Tongue	141					2	4	4	4		1		15
Rest of Mouth	142-145		1	1	1	4	5	6	2	1			21
Pharynx and Tonsil	146-149					1	2	8	3				14
Esophagus	150					1	6	8	7				22
Stomach	151					3	12	25	20	11	1		72
Small Intestine	152				1			2	3				6
Colon - Rectum	153-154				4	9	43	82	70	25	1		234
Liver, Gallbladder	155-156					1	2	4	2	1			10
Pancreas	157						9	16	12	2			39
Peritoneum; Retroperitoneum & Other Digestive System	158-159						2	2	3	1			8
Nasal Cavities; Accessory Sinuses, Middle and Inner Ear	160						1						1
Larynx	161					1	10	14	7	2			34
Trachea, Lung Bronchus, Pleura	162-163				1	14	65	143	110	30	1		364
Thymus, Heart, Mediastinum	164				1	2	1						4
Bone Marrow (Includes Leukemia and Plasma Cell Tumors	169	1	2	2	2	3	8	19	23	2			62
Bone, Connective and Other Soft Tissue	170-171			2	2		1	6	3		4		18
Skin (Includes Melanomas)	173		2	8	16	46	117	172	193	74	9	11	648
Breast	175					1	2	1		1			5
Prostate	185						12	69	115	54	11		261
Testis	186		1	7	4	2	1	1					16
Penis and Other Male Genital	187				1		1	3	1	2			8
Bladder	188				1	8	18	24	40	18	4		113
Kidney and Other Urinary	189					2	7	14	11	2		1	37
Eye and Lacrimal Gland	190	1				1		2	2				6
Brain, Nervous System	191-192	3	1	4	1	4	5	10	6	1		1	36
Thyroid and Other Endocrine	193-194	1		1			1	3		1			7
Other Ill Defined Sites	195												0
Lymph Nodes	196	2	7	3	7	9	10	19	10	4			71
Unknown Primary Site	199			2	1	4		9	10	2			28
TOTAL		8	14	30	43	119	349	675	664	234	32	13	2181

PROVINCIAL CANCER REGISTRY OF NOVA SCOTIA

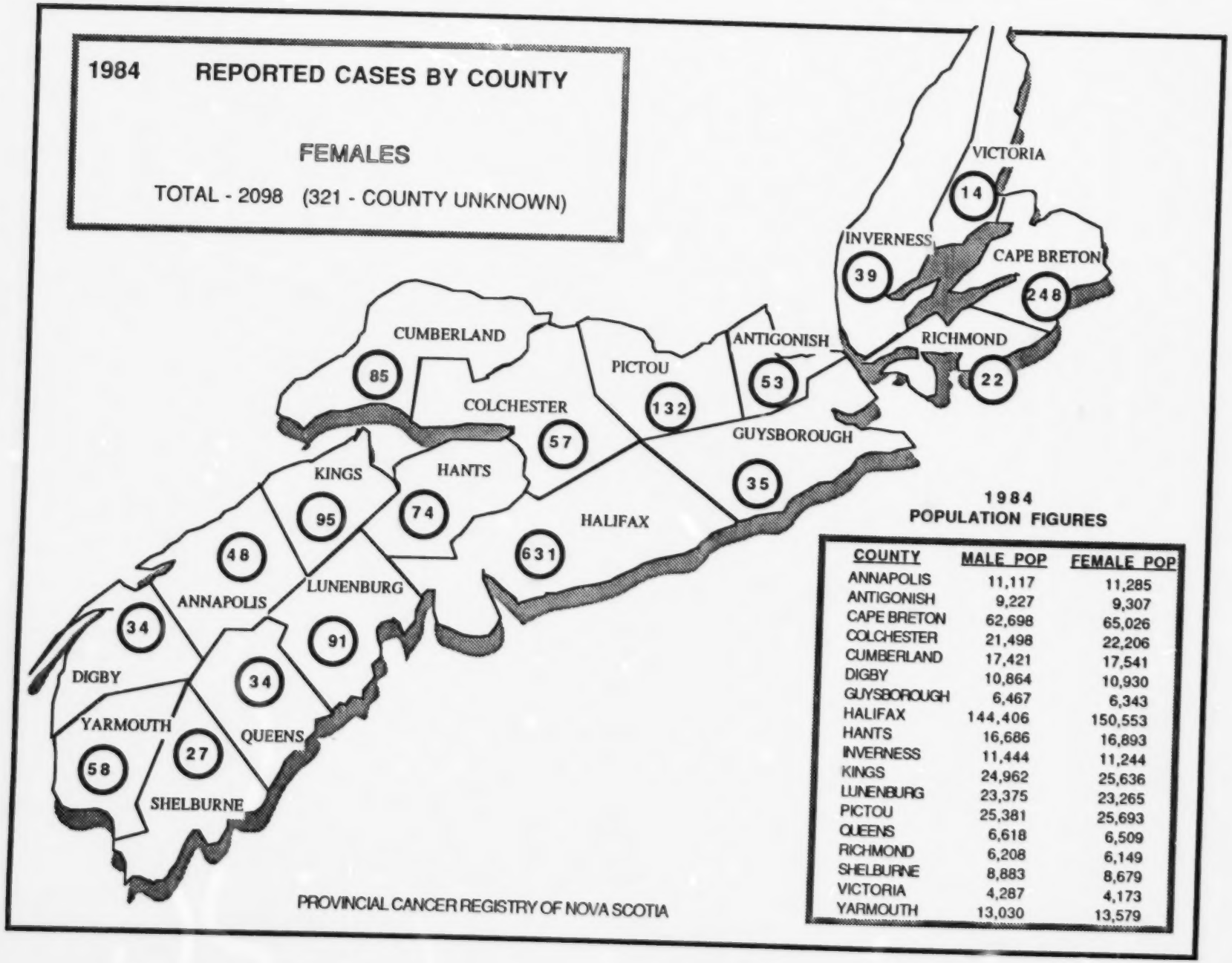
PRIMARY SITES WITH AGE BREAKDOWN (FEMALE - 1984)

SITE	ICD-O CODE	AGE BREAKDOWN 0 - 9	10 - 19	20 - 29	30 - 39	40 - 49	50 - 59	60 - 69	70 - 79	80 - 89	90 +	NOT AVAL	TOTAL
Lip	140								2				2
Tongue	141						1	4		1			6
Rest of Mouth	142-145						1	1	2	1			5
Pharynx and Tonsil	146-149					1	1	1	1				4
Esophagus	150						1	3	3	1			8
Stomach	151					1	4	9	12	5	1		32
Small Intestine	152						1		1	1			3
Colon - Rectum	153-154			1	3	9	24	46	85	45	9		222
Liver, Gallbladder	155-156				1		2	4	4	2			13
Pancreas	157					5	5	9	13	9	4		45
Peritoneum; Retroperitoneum & Other Digestive System	158-159	1					1	2		1	1		6
Nasal Cavities; Accessory Sinuses, Middle and Inner Ear	160								1	1			2
Larynx	161			1	1	1	2		1	1			7
Trachea, Lung, Bronchus, Pleura	162-163			1	2	7	30	52	39	9			140
Thymus, Heart, Mediastinum	164	1					1						2
Bone Marrow (Includes Leukemia and Plasma Cell Tumors	169	1		2	4	3	4	5	10	2			31
Bone, Connective and Other Soft Tissue	170-171	4	2	2		1		2	4	1			16
Skin (Includes Melanomas)	173			7	29	36	61	110	123	63	23	11	463
Breast	174			1	21	49	84	114	92	38	5	1	405
Cervix Uteri	180		3	121	110	32	18	17	6	4	1	2	314
Corpus Uteri	182				2	6	17	32	15	10	2	1	85
Ovary, Fallopian Tube, Broad Ligament	183		1	1	5	10	15	18	11	8			69
Other Female Genital	184			2	5	2	2	2	7	1			21
Bladder	188				2	3	8	8	14	9	1		45
Kidney and Other Urinary	189				1	2	6	7	3	1			20
Eye and Lacrimal Gland	190			1			1		2	3			7
Brain, Nervous System	191-192	2	2		1	1	3	1	5	2			17
Thyroid and Other Endocrine	193-194			3	5	4	1	2	2			1	18
Other Ill Defined Sites	195												0
Lymph Nodes	196		4	2	6	5	10	9	9	5	1		51
Unknown Primary Site	199					2	4	14	11	6	1	1	39
TOTAL		9	12	145	198	180	308	472	478	230	49	17	2098



1984 POPULATION FIGURES

COUNTY	MALE POP	FEMALE POP
ANNAPOLIS	11,117	11,285
ANTIGONISH	9,227	9,307
CAPE BRETON	62,698	65,026
COLCHESTER	21,498	22,206
CUMBERLAND	17,421	17,541
DIGBY	10,864	10,930
GUYSBOROUGH	6,467	6,343
HALIFAX	144,406	150,553
HANTS	16,686	16,893
INVERNESS	11,444	11,244
KINGS	24,962	25,636
LUNENBURG	23,375	23,265
PICTOU	25,381	25,693
QUEENS	6,618	6,509
RICHMOND	6,208	6,149
SHELBURNE	8,883	8,679
VICTORIA	4,287	4,173
YARMOUTH	13,030	13,579



1984 POPULATION FIGURES

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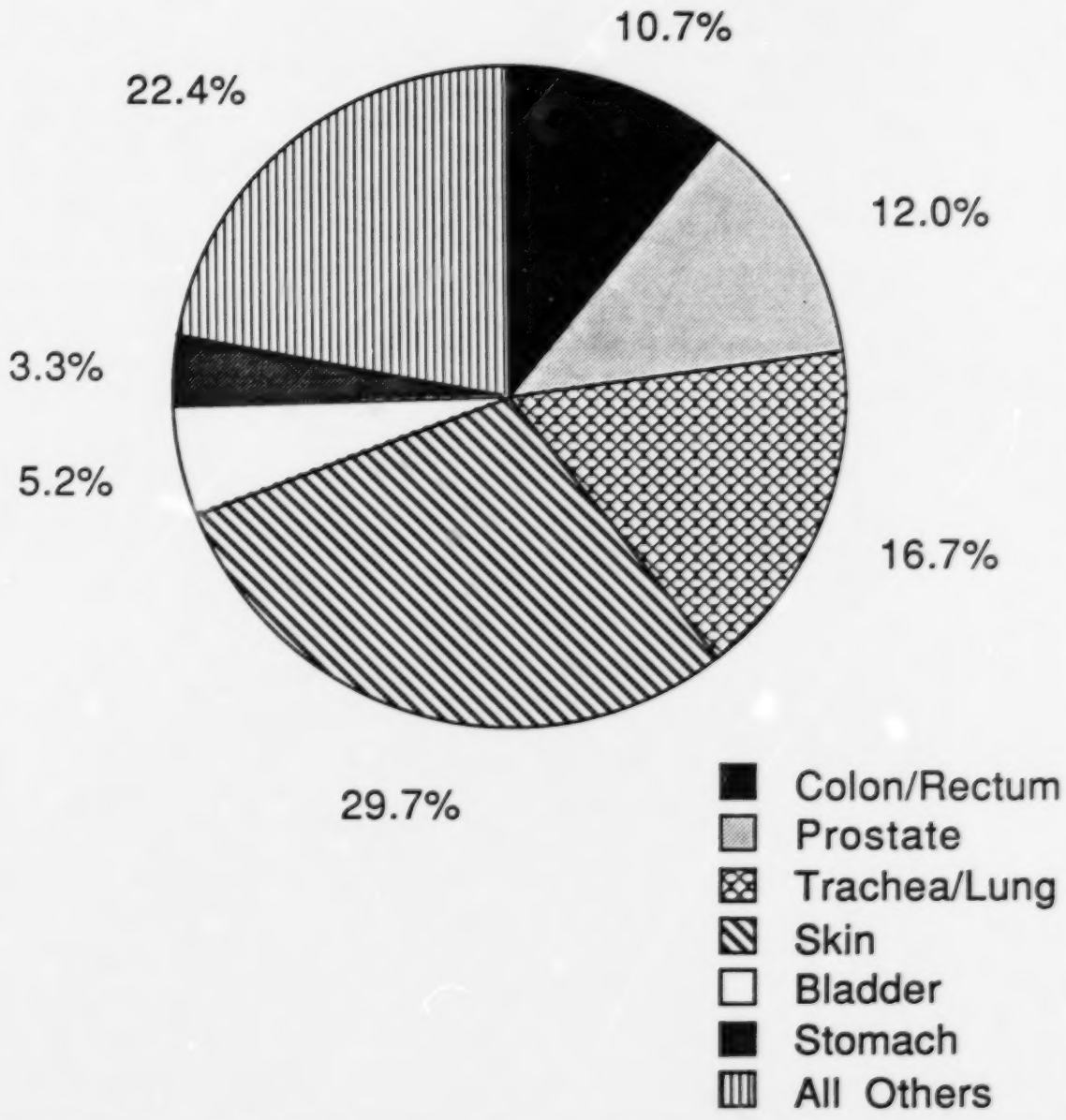
QUEENS	6,618	6,509
RICHMOND	6,208	6,149
SHELBURNE	8,883	8,679
VICTORIA	4,287	4,173
YARMOUTH	13,030	13,579

Major New Primary Sites

Registrations of 1984

MALES (2181)

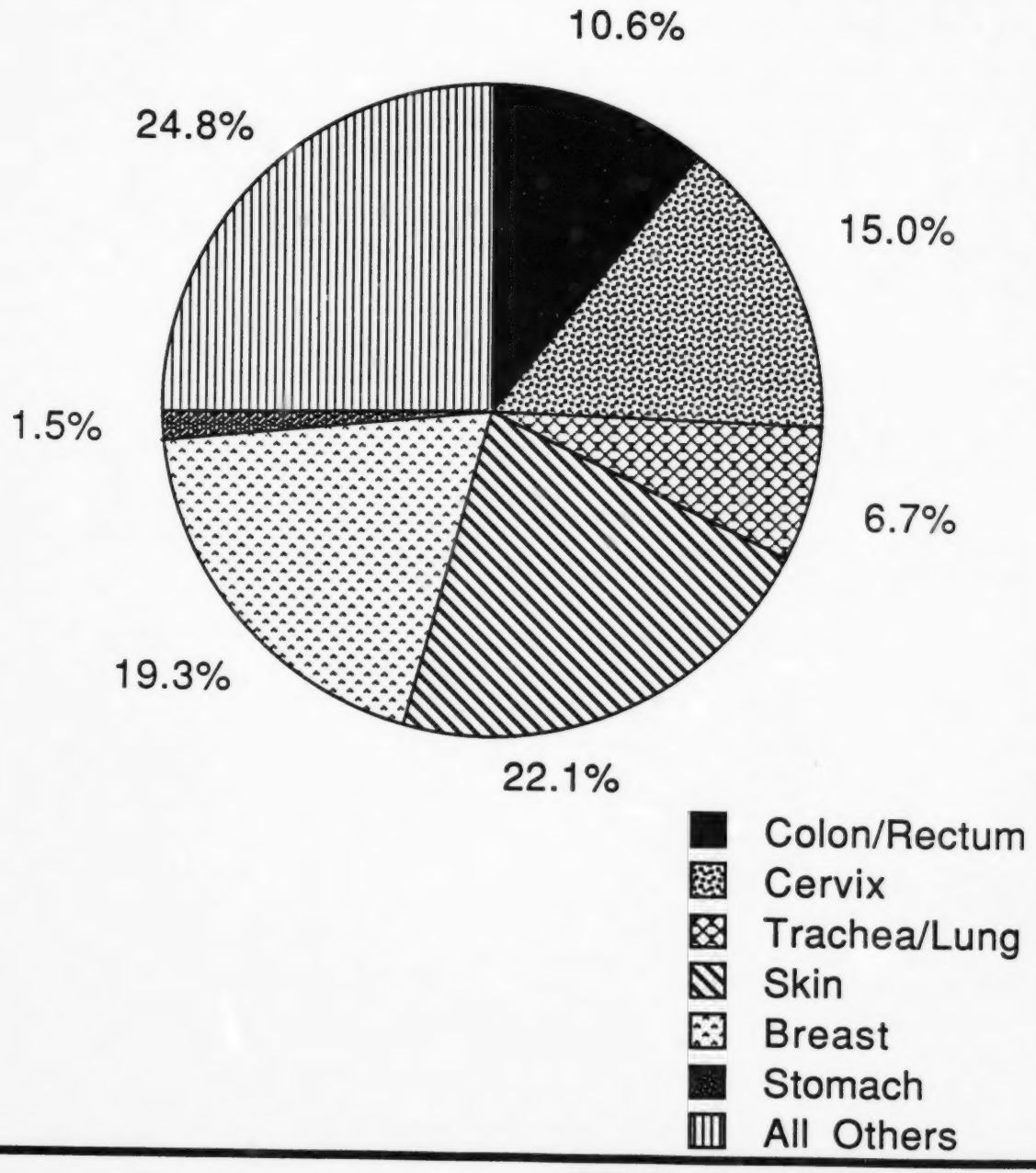


PROVINCIAL CANCER REGISTRY OF NOVA SCOTIA

Major New Primary Sites

Registrations of 1984

FEMALES (2098)



PROVINCIAL CANCER REGISTRY OF NOVA SCOTIA

Cancer Treatment and Research Foundation of Nova Scotia
FINANCIAL STATEMENTS

Year Ended March 31, 1986

AUDITOR'S REPORT

To the Chairman and Members
of the Cancer Treatment and
Research Foundation of Nova Scotia

I have examined the balance sheet of the Cancer Treatment and Research Foundation of Nova Scotia as at March 31, 1986 and the statements of general fund revenues and expenses and continuity of special fund for the year then ended. My examination was made in accordance with generally accepted auditing standards and accordingly, included such tests and other procedures as I considered necessary in the circumstances.

In my opinion, these financial statements present fairly the financial position of the Foundation as at March 31, 1986 and the results of its operations for the year then ended in accordance with the accounting policies stated in Note 2 to the financial statements, applied on a basis consistent with that of the preceding year.

O.P. Cormier, F.C.A.
Auditor General

Halifax, Nova Scotia
July 25, 1986

BALANCE SHEET
As at March 31, 1986

ASSETS

	1986	1985
General Fund		
Cash	$ —	$ 43,773
Short term investments	239,836	417,240
Accounts receivable	225,062	369,386
Employee advances	4,350	4,445
Prepaid expenses	101,333	99,745
Due from the Province of Nova Scotia Year end settlement account (Note 3)	312,465	116,424
Due from Special Fund	23,940	—
	$ 906,986	$ 1,051,013
Special Fund		
Cash	$ 25,167	$ 20,434
Short term investments	194,345	135,783
Accounts receivable	42,710	27,056
Due from General Fund	—	3,143
	$ 262,222	$ 186,416

LIABILITIES AND FUND BALANCES

General Fund		
Bank overdraft	$ 25,690	$ —
Accounts payable and accruals	758,896	937,670
Unearned income	122,400	110,200
Due to Special Fund	—	3,143
	$ 906,986	$ 1,051,013
Special Fund		
Due to General Fund	$ 23,940	$ —
Fund Balances		
Radiation Oncology Trust Fund	6,864	9,119
Tumor Clinic Research Fund	2,791	2,791
Trial Funds	10,909	11,000
Restricted Funds	41,525	26,612
Unrestricted Funds	176,193	136,894
	$ 238,282	$ 186,416
	$ 262,222	$ 186,416

GENERAL FUND
Statement of Revenues and Expenses

For the Year Ended March 31, 1986

	1986	1985
Revenue		
Nova Scotia Department of Health		
Insured Services	$ 2,937,600	$ 2,592,000
Capital equipment	51,737	127,382
Hosptial services	895,279	1,061,053
Non-insured services	92,749	81,817
Other	6,054	9,911
	3,983,419	3,872,163
Expenses		
Nursing services	583,870	571,130
Technical services	338,982	310,096
Laboratory services	86,372	74,018
Radiation oncology services	493,844	393,333
Medical oncology services	199,550	165,382
Epidemiology services	9,445	—
School services	27,843	22,319
Medical physics	637,261	626,499
Health records	522,666	566,739
Clinic administration	733,845	672,935
Administration	372,566	366,746
Data processing	111,448	92,008
Research and development	10,031	—
Capital equipment	51,737	127,382
	4,179,460	3,988,587
Shareable deficit	$ 196,041	$ 116,424

CONTINUITY OF SPECIAL FUND

For The Year Ended March 31, 1986

	Radiation Oncology Trust Fund	Tumor Clinic Research Fund	Trial Fund	Chemotherapy Fund	Unrestricted Funds	Total
Balance, beginning of year	$ 9,119	$ 2,791	$ 11,000	$ 26,612	$ 136,894	$ 186,416
Add: Donations	—	—	21,568	15,213	14,803	51,584
Investment income	515	—	—	—	37,388	37,903
	515	—	21,568	15,213	52,191	89,487
Less: Clinical research	—	—	21,659	—	—	21,659
Research grant	—	—	—	—	10,200	10,200
Bad debt expense	—	—	—	—	2,687	2,687
Other expense	2,770	—	—	300	5	3,075
	2,770	—	21,659	300	12,892	37,621
Balance, end of year	$ 6,864	$ 2,791	$ 10,909	$ 41,525	$ 176,193	$ 238,282

NOTES TO FINANCIAL STATEMENTS

March 31, 1986

1. Authority

The Cancer Treatment and Research Foundation of Nova Scotia was established by the Cancer Treatment and Research Foundation Act which was proclaimed on November 25, 1980.

The objects of the Foundation are to operate multidisciplinary facilities for the diagnosis and treatment of cancer and research and education of the public in problems relating to cancer.

2. Accounting Policies

These financial statments have been prepared in accordance with generally accepted accounting principles modified by the policy of charging furniture and equipment purchases to expense in the year of acquisition. This expense is charged to the General Fund.

3. Due From the Province of Nova Scotia

The shareable deficit in the General Fund is recoverable from the Province of Nova Scotia. The year end settlement account balance represents the amount of accumulated shareable deficits of the Foundation receivable at fiscal year end.

The balance due from the Province at year end is dependent upon the approval of the Department of Health based upon their review of the Foundation's financial statements and accounting records.